

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A video processing method for preparing an anti-aliased foreground image for display over an image background, said method comprising the steps of:

(i) preparing said image background for display;

(ii) generating ~~an~~ original foreground image signals by manipulation of a contiguous group of graphics primitives;

(iii) applying anti-aliasing filtering to edges of each primitive of said group of primitives to generate ~~a~~ primitive-processed image signals;

(iv) ~~superposing processing said primitive-processed image signals to~~
superpose said primitive-processed image over said image background; and

(v) ~~superposing processing said original foreground image signals to superpose~~
said original foreground image over said primitive-processed image.

2. (Original) A method according to claim 1, in which a result of step (v) is a combined image, said method comprising the steps of:

(vi) low-pass filtering said combined image to generate a low-pass filtered foreground image;

(vii) detecting peripheral edge regions of said group of graphics primitives; and

(viii) superposing only said peripheral edge regions of said low-pass filtered image over said combined image.

3. (Original) A method according to claim 2, in which said low-pass filtering step comprises a horizontal low-pass filtering step and a vertical low-pass filtering step.

4. (Original) A method according to claim 3, in which said horizontal low-pass filtering step comprises:
interpolating a pixel-shifted version of said original foreground image, said pixel-shifted image being shifted horizontally by a non-integral number of pixels; and
shifting said pixel-shifted image back by said non-integral number of pixels.

5. (Original) A method according to claim 4, in which said non-integral number of pixels is half a pixel.

6. (Original) A method according to claim 5, in which said vertical low-pass filtering step comprises:
interpolating a vertically-expanded image from said original foreground image;
and
interpolating a non-vertically expanded image from said vertically expanded image.

7. (Original) A method according to claim 6, in which said vertically expanded image is expanded by a vertical factor of 2.

8. (Currently Amended) A method according to claim 2, in which each pixel of said original foreground image has an associated transparency coefficient, and in which steps (vi) and (viii) comprise:

setting said transparency coefficient to a value indicative of a high degree of transparency for pixels near a peripheral edge of the group of graphics primitives; and

writing said low-pass filtered image over said original foreground image so that said original foreground image is modified by pixels of said low-pass filtered image in dependence on said transparency coefficient associated with each display position of said original foreground image.

9. (Currently Amended) A method according to claim 8, in which step (ii) comprises:

applying a transformation to a source image to generate said original foreground image, said transformation including manipulating parts of said source image so as not to be oriented parallel to said display plane; and

in which said setting step comprises:

setting said transparency coefficient associated with pixels of said original foreground image representing image regions of said original foreground image which are not oriented parallel to said display plane to a value indicating a non-zero degree of transparency.

10. (Original) A method according to claim 9, in which said setting step comprises:

setting said degree of transparency for pixels of said original foreground image representing image regions of said original foreground image which are not oriented parallel to said plane of said image background to a value dependent on said angle between those image regions and said display plane.

11. (Original) A method according to claim 9, in which said setting step comprises:

setting said transparency coefficient associated with pixels within a graphics primitive to a value indicating a non-zero degree of transparency only if said primitive does not form part of a contiguous parallel set of primitives.

12-15. (Canceled)

16. (Currently Amended) Video processing apparatus for preparing an anti-aliased foreground image for display over an image background, said apparatus comprising:

- (i) logic means to prepare said image background for display;
- (ii) a generator to generate an original foreground image signals by manipulation of a contiguous group of graphics primitives;
- (iii) an anti-alias filter to apply anti-aliasing filtering to edges of each primitive of said group of primitives to generate a primitive-processed image signals;

(iv) logic means to process said primitive-processed image signals to
superpose said primitive-processed image over said image background; and

(v) logic means to process said original foreground image signals to superpose
said original foreground image over said primitive-processed image.

17. (New) A program storage medium including a processing program,
stored thereon, for controlling a video processing apparatus to perform a process of preparing
an anti-aliased foreground image for display over an image background in order to provide
anti-aliasing in a video effects system, the process comprising:

- (i) preparing said image background for display;
- (ii) generating original foreground image signals by manipulation of a
contiguous group of graphics primitives;
- (iii) applying anti-aliasing filtering to edges of each primitive of said group of
primitives to generate primitive-processed image signals;
- (iv) processing said primitive-processed image signals to superpose said
primitive-processed image over said image background; and
- (v) processing said original foreground image signals to superpose said
original foreground image over said primitive-processed image.